EXPLORING PURCHASE INTENTION OF EV AMONG MALAYSIAN SALARIED WORKERS

BY

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A final year project submitted in partial fulfilment of the requirement for the degree of

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DECLARATION

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PREFACE

Students undertaking the Bachelor of Marketing (Honours) program are required to complete a final year project as part of the graduation requirements. The topic of this study is **Exploring Purchase Intention of EV Among Malaysian Salaried Workers.** This research seeks to examine the factors that influence Malaysian salaried workers' intention to purchase EVs as sustainable transportation becomes increasingly important.

In today's evolving automotive industry, electric vehicles have emerged as a key solution to reduce carbon emissions and dependence on fossil fuels. Malaysian salaried workers, as an economically active consumer segment with purchasing power, play an important role in shaping the future demand for EVs. Understanding their purchase intention is essential for policymakers and industry players seeking to accelerate EV adoption, improve market strategies, and support the nation's sustainability agenda.

By applying the Stimulus–Organism–Response (SOR) model and Perceived Value Theory, this study investigates how charging infrastructure availability, price perception, environmental awareness, and government support influence consumers' perceived value and purchase intention toward EVs. A structured approach has been adopted, combining theoretical review, data collection, and statistical analysis to ensure reliable and meaningful findings. Both primary and secondary data sources are utilized to provide a comprehensive understanding of the research problem.

In conclusion, this study offers insight on Malaysian salaried workers' EV purchasing intentions, including charging infrastructure, price perception, environmental consciousness, government assistance, and perceived value. Future academic study and governments and businesses promoting EV adoption and sustainable mobility in Malaysia should benefit from the findings.

ABSTRACT

Despite growing worried about the environment's long-term sustainability, electric vehicle (EV) adoption remains low in Malaysia. This study investigates the elements that motivate Malaysian salaried workers' intentions towards purchasing electric automobiles, with an emphasis on charging infrastructure availability, price perception, environmental awareness, government support, and perceived value, which all impacts the purchase intention. Utilizing the Stimulus-Organism-Response (SOR) model and Perceived Value Theory, the study implements a qualitative method that involves the distribution of a questionnaire that are structured online to Malaysian salaried employees aged 18 to 60 who have not yet acquired an electric vehicle. The findings will be evaluated with PLS-SEM via SmartPLS. Practically, the results assist policymakers and industry stakeholders design initiatives to encourage EV purchases and sustainable transportation in Malaysia.

Keywords: Malaysian Salaried Workers, Electric Vehicles, Stimulus-Organism-Response Model, Perceived Value Theory, Purchase Intention, Structural Equation Modelling.

Subject Area: HF5410-5417.5 Marketing. Distribution of products

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LIST OF ABBREVIATIONS

EV	Electric Vehicles
CI	Availability of Charging Infrastructure
GS	Government Support
PP	Price Perception
EA	Environmental Awareness
PI	Purchase Intention
PV	Perceived Value
SOR	Stimulus-Organism-Response
TAM	Technology Acceptance Model Theory
TPB	Theory of Planned Behaviour
VBM	Value-Belief-Norm
IV	Independent Variables
DV	Dependent Variable

CHAPTER 1: RESEARCH OVERVIEW

1. Introduction

The study concentrates on the factors that affect the intentions of Malaysian salaried employees to purchase electric vehicles. This section will outline parts like study's research background, problems, and objective.

1.1 Research Background

Since the introduction of the internal combustion engine (ICE) in the late 1800s, gasoline and diesel-powered vehicles have dominated the worldwide transportation. These conventional engine vehicles transformed mobility, boosted economic growth, and became signs of individual freedom and industrial progress. The internal combustion engines (ICE) are frequently used partly due to their high-power density, low cost, durability, and adaptability with many high-energy fuels form diverse sources (Mignard & Pritchard, 2006). However, the motor vehicle sector began transitioning to a greener alternative, beginning with hybrid vehicles and later proceeding with fully electric vehicles (EVs). There are four types of electric vehicles (EVs): battery electric vehicles (BEVs), hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs), and fuel cell electric vehicles (FCEVs). These groups are based on how they gain their electricity and what kind of powertrain they have (Szałek et al., 2021). HEVs integrate an internal combustion engine and a motor powered by electricity to enhance fuel economy. These cars can be mild-HEV, full-HEV, or PHEV, and they aren't in need of to be charged at stations (Das et al., 2017). PHEVs are equipped with larger batteries than HEVs, can be recharged at stations, and are a hybrid vehicle that combines an electric and internal combustion engine. However, PHEVs produce emissions while

using gasoline for longer journeys, even if they are environmentally favorable for short distances (Verma et al., 2021). BEVs, sometimes known as "pure EVs," are entirely powered by electricity that is kept in batteries and must be recharged at stations (Li et al., 2017). These performances depend on temperature control and battery capacity, but they don't emit any greenhouse gases or noise pollution (Lyu et al., 2019). Besides, FCEVs are known for not putting out any pollution because they are driven by an electric engine and a fuel cell instead of a battery. They utilize hydrogen stored in special tanks and only need to be refilled sometimes (Un-Noor et al., 2017). Vehicle classes can be seen in Figure 1.1 according to emissions, powertrain components, and energy sources.

The EV technology is gaining popularity in the transportation industry because to its low oil consumption and environmental benefits (Jyotheeswara Reddy & Natarajan, 2018). Research suggests that electric cars use 40 to 60% less gas than regular cars and release 30 to 50 percent less carbon dioxide into the air (Liu et al., 2019). In addition, electric vehicles make very little to no noise, are very efficient, and are flexible when it comes to grid operation and integration (Nanaki, 2021). EVs and their batteries can also be recycled, which helps meet the growing demand for battery components and reduces environmental worries (Qiao et al., 2019). Another benefit of electric vehicles is their design and mechanical systems. Compared to ICEs, they have a smaller, simpler design with less moving parts and simpler transmission. This is because EVs can use as much as 86% of their battery's energy resources to make power, but ICEs can only accomplish that with 20%, this simplified design helps to improve energy consumption (Veza et al., 2023). When it comes to performance, EVs perform better than ICEs in terms of well-to-wheel (WTW) efficiency, especially when they are powered by renewable energy sources (Albatayneh et al., 2020). EVs are more responsive, dependable, and ideal for digital integration, making them appealing choices for customers (Sanguesa et al., 2021). Besides, EVs are considered as potential substitutes for maintaining city traffic by reducing the dependency on oil and the consequent air pollution, which offer significant advantages as well as the environment and human health (Wu et al., 2019).

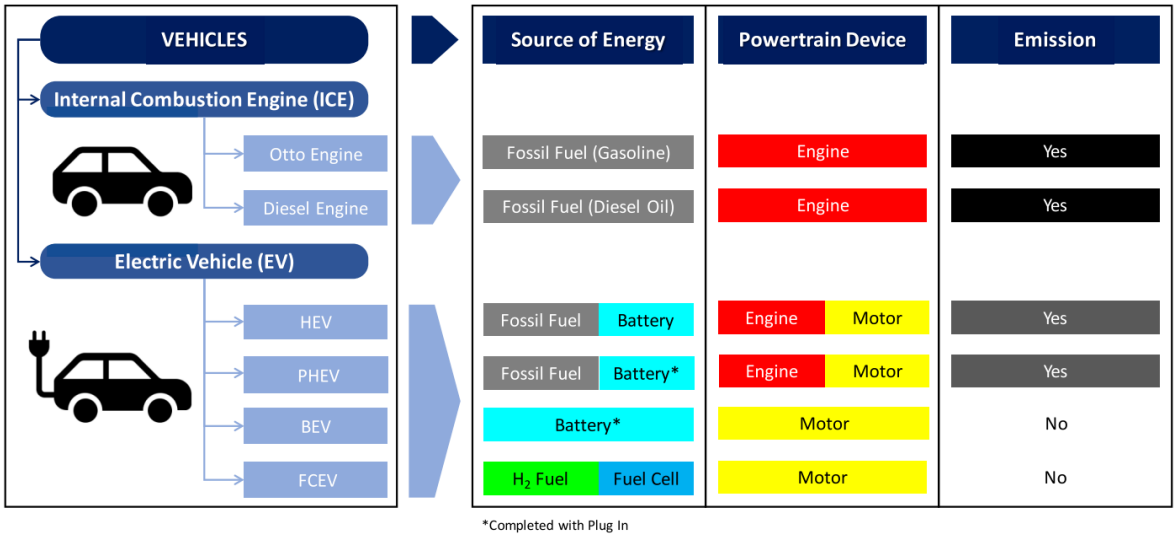

Figure 1.1 Classification of Vehicle, ICE and EV
Source: Veza et al. (2023)

1.2 Research Problem

Electric vehicles (EVs), as a growing innovation in transportation technology, reduce reliance on polluting fuels while providing various environmental benefits (Shin et al., 2019). Some analysts predict that this trend will persist over the next few decades, with estimates suggesting that by 2040, EV sales could surpass those of gasoline- and diesel-fueled vehicles (Riley et al., 2019). However, although the EV market is expanding, the transition toward electric vehicles is occurring more slowly than some experts and car manufacturers had anticipated (Morgan, 2023). According to the fifth annual EY Global Mobility Consumer Index report, the demand for electric vehicles (EVs) in Malaysia has experienced a decline. The report indicates that Malaysia is at a crucial point in its shift towards electric vehicles (EVs). Currently, EV sales in Malaysia are relatively low and account for a minor share of the market (MGTC, 2024). According to Malaysia's Minister of Investment, Trade and Industry, Tengku Datuk Seri Zafrul Abdul Aziz, there have been a total of 33,319 electrified vehicles as of September 30, 2024, which only makes up approximately 5% of the overall industry volume (Bernama, 2024). EV

purchase in Malaysia remains low despite policy incentives, hindered by high costs, inadequate charging infrastructure, and limited consumer awareness. Further research is required to investigate the factors influencing Malaysian consumers' intention to purchase, as most existing studies focus on developed countries.

1.2.1 Practical Problem

From practical perspective, Malaysia's sluggish electric vehicle (EV) purchase undermines its roadmap toward sustainability and its 2050 carbon neutrality goal, especially considering that transportation sector is one of the key contributors to greenhouse gas emissions at the national level by 27% of 277,531,770 tons fossil CO2 emissions in 2022 based on Figure 1.2 (International Energy Agency, 2022; NRECC,2023). The Malaysian government has set aggressive goals to increase EV purchases, with a target of 15% EVs by 2030 and 38% of the yearly total industrial volume (TIV) by 2040 (Pandak et al, 2024). However, despite policy efforts under the National Automotive Policy 2020, based on information provided by the Malaysian Automobile Association (MAA), only 14,766 electric vehicles were sold in Malaysia in 2024, in contrast to approximately 816,747 total vehicle sales nationwide, showcasing poor market penetration. High upfront purchase prices render EVs financially inaccessible to many Malaysian households, while inadequate and unevenly available charging infrastructure fuels range anxiety, particularly in non-urban areas. Furthermore, consistent concerns about the availability of changing stations, disposal, and maintenance costs combined with skepticism about EVs' true environmental impact given Malaysia's reliance on fossil fuel electricity generation which diminishing EVs' credibility as a sustainable alternative (Kester et al., 2020; EY Malaysia, 2024). Consumer research further reveals environmental concern (Yeoh, 2023), and convenience or cost-related perceived consequences (Afroz et al., 2015) as the factors that directly influence Malaysians' EV purchase intentions. These insights point to a broader practical gap in that the society lack an integrated understanding of

how sustainability-linked uncertainties from economic viability to environmental authenticity, which indirectly affect consumer purchase intention toward EVs in Malaysia. Therefore, further research is required to investigate on how sustainability-related barriers and drivers influence EV purchase intentions in Malaysia to strengthen consumer trust and accelerate the country's low-carbon transition.

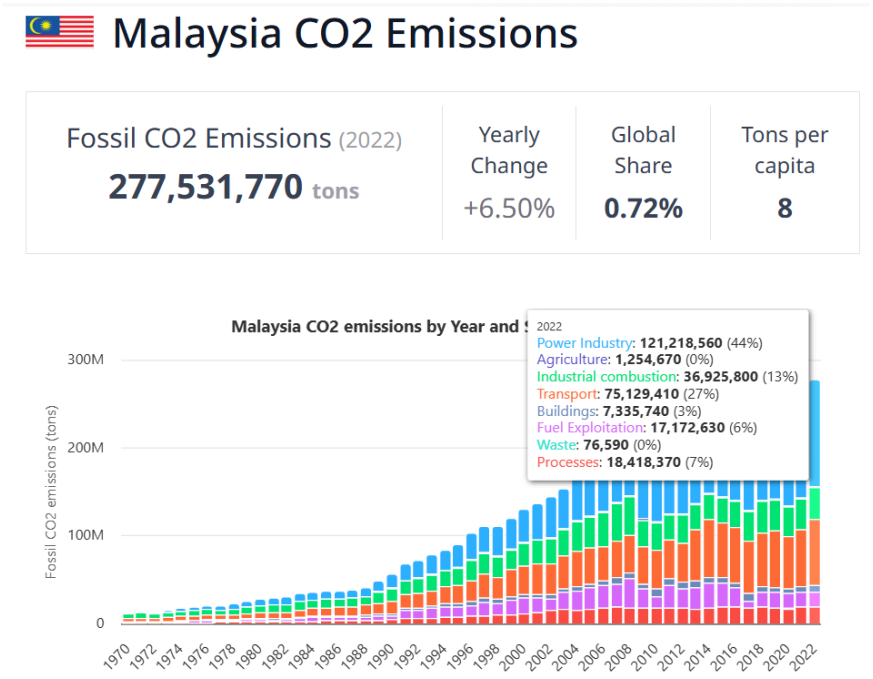

Figure 1.2: Malaysia CO2 Emissions

Source: International Energy Agency (IEA). (2022)

1.2.2 Theoretical Problem

From a theoretical perspective, there is still limited understanding of the factors that drive or hinder electric vehicle (EV) purchase intention in the Malaysian context. Existing consumer behavior theories, such as the Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM), and Value-Belief-Norm (VBN) Theory, suggest that attitudes, perceived usefulness, social norms, environmental concerns, and perceived risks shape

individual decision-making. However, most empirical applications of these theories have been conducted in industrialized countries such as Norway, U.S, and Germany, where EV purchase is already at an advanced stage and consumers benefit from robust charging networks, strong policy support, and greater environmental awareness such as the studies from Hasan (2021); Rezvani et al. (2015); Krupa et al. (2014); Kley et al. (2011). Because results from industrialized nations cannot be immediately applied to developing nations like Malaysia, there is a contextual gap caused by theory-driven research, where consumers face different socio-economic realities, cultural values, and infrastructural constraints Using the TPB and TAM frameworks, local studies by Vafae et al. (2022), Poon et al. (2024), and Tin et al. (2024) have also investigated the elements influencing customers' inclinations to buy electric cars. However, since these theories were combined and the findings remain dispersed, the identified determinants are not entirely satisfactory. By contrast, research in Malaysia remains fragmented and relatively scarce, with only a handful of studies applying behavioral theories to understand consumer purchase intention toward EVs. Therefore, there is a pressing need to adapt and extend existing behavioral theories by applying framework which focus on how external stimuli influence consumers' internal evaluations, ultimately shaping their behavioral responses, including purchase intention toward electric vehicles within Malaysia's unique context as a developing country with moderate EV penetration and evolving policy frameworks to fill this theoretical gap.

1.3 Research Objectives & Problem

1.3.1 General Research Objectives

The research examines determinants affecting Malaysian salaried workers' purchase intention towards Electric Vehicle (EV) through the SOR model and Perceived Value Theory, considering the availability of charging infrastructure, government support, price perception, and environmental awareness. It indicates that the availability of charging infrastructure, government support, price perception, and environmental awareness act as stimulus; the perceived value act as organism; the purchase intention act as response in the SOR model.

1.3.2 Specific Research Questions

1. To examine the correlation between the availability of charging infrastructure, government support, price perception, environmental awareness and perceived value.

2. To examine the correlation between perceived value and the purchase intention of EVs among Malaysian salaried workers.

1.3.3 Research Questions

1. Does the availability of charging infrastructure, government support, price perception, and environmental awareness significantly influence the perceived value?

2. Does perceived value significantly influence the purchase intention of Malaysian salaried workers towards EVs?

1.4 Research significance

Our research on the purchase intention about electric vehicles (EVs) is important for both practitioners and researchers. Utilizing the Stimulus-Organism-Response (SOR) framework, we seek to offer significant insights that enhance academic knowledge and assist stakeholders in tackling practical issues within the electric vehicle industry.

1.4.1 Practical Significance

Our study is useful for practitioners because it gives policymakers a better understanding of how charging infrastructure, price perception, environmental awareness, and government support affects people's decisions to buy electric vehicles (EVs). This will help them create better incentives and policies to help Malaysia reach its carbon reduction goals. It also helps EV makers and sellers by showing them what aspects affect how people perceived the value of a product. This can help them with pricing, marketing, and building consumer trust. Also, the results are important for energy companies and infrastructure builders since they show how important charging infrastructure is for influencing individual's decisions to purchase an electric vehicle. This information can assist them prioritize investment and get the market ready for EV purchase.

1.4.2 Theoretical Significance

Despite this, most research has utilized the Theory of Planned Behavior (TPB) to study purchase intention of EV by focusing on three components like attitude toward behavior, subjective norms, and perceived behavioral control (Rezvani et al.,2015; Huang & Ge,2019; Jiang et al.,2025). Based on Lee & Yun (2015), they stressed that TPB concentrates on rational choice

making and mental processes that affect intention and action. Although TPB is useful in predicting intention. Conner & Armitage (1998) propose that models that include emotional factors might provide better explanation power. The SOR model combines cognitive and emotional variables to understand how external stimuli affect behavior, including purchase intention (Lee & Yun, 2015). In such, our study demonstrates how both cognitive and affective aspects affect the purchase intention and strengthens the application of SOR in consumer behavior research. Besides, our research contributes to the work that already exists on EV purchase through looking at Malaysia, a developing nation where the EV sector is still in its early growth stage. Most of the existing research on EV purchases comes from developing countries. This contributes fresh insights to global electric vehicle research.

1.5 Conclusion

Chapter 1 gave a general idea of what this research effort was about. This introduction makes it easier to find the study's goals in connection to the overall research limits.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter reviews the literature to investigate the variables that may impact consumers' purchasing intentions for electric vehicles (EVs). The focus is on the availability of charging infrastructure, price perception, environmental awareness, government support, and perceived value. The chapter is grounded in the Stimulus-Organism-Response (SOR) model along with Perceived Value Theory, which shows the influence of external factors and cost-benefit evaluations on consumer behavior.

2.1 Underlying Theories

2.1.1 SOR Model

In this study, SOR models are used to explore the purchase intention of EVs among Malaysian salaried workers. According to the SOR theoretical model of environment technology, all parts of the environment have a

stimulating effect (S), influencing people's internal states (O) and driving their behavioral actions (R) (Mehrabian & Russell, 1974). In accordance to their stimulus-organism-response paradigm, stimuli involve multiple aspects of the physical environment and are external to the individual (Bagozzi, 1986). The stimulus variable (S) is the main influence in the context of consumer purchases and has connections to subsequent decision-making (Su & Swanson, 2017). The term organism (O) represents the internal state of perception, sensation and thinking (Bagozzi, 1986). The term reaction (R) describes the final outcomes or behaviors, including behavioral intents and/or psychological reactions like attitudes (Xu et al., 2020). This indicates that the emotional condition of customer servers' functions as a intermediary between the environment (the stimulus) and consumer behavior (Jang & Namkung, 2009).Additionally, reactions to an environment can be split into two categories, avoidance and approach behavior, which characterized by a desire to stay, observe, and investigate the surroundings and interact with people there, whereas avoidance consists of the opposite actions (Mehrabian & Russell, 1974). The model has shown that external environmental elements and situations impact the organism's mood, leading the organism to respond through behavior. As such, the model looks at how customers plan to buy things by looking at how they feel about things in their environment. It describes how stimuli (S) cause emotional reactions (O) and behavioural responses (R).

The SOR model, however, has been applied by recent studies to green marketing and EV purchase intentions. Rani et al. (2024) applied used an extended SOR framework to study EVs and discovered that external effects such as messages about the environment and incentives promote favorable internal evaluations, which in turn increase purchase intention. Similarly, Wang et al. (2011) also used the framework to investigate online shop elements as stimuli, their effects on consumer's internal states, and their subsequent impact on consumers' behavioral reactions.

In addition, research studies have applied SOR to EV purchase intentions. Yang & Lan (2023) used the framework to investigate how stimuli like product characteristic and environmental attitudes affect perception of risk and value, impacting EV purchase intention. Singh et al. (2023) found that lifestyle and value-driven psychological backgrounds affect attitude and purchase behavior under an SOR perspective. However, limited research has leveraged SOR in this context and therefore, SOR model is reasonable for this research because it considers interaction of external stimuli, internal evaluations, and behavioral responses.

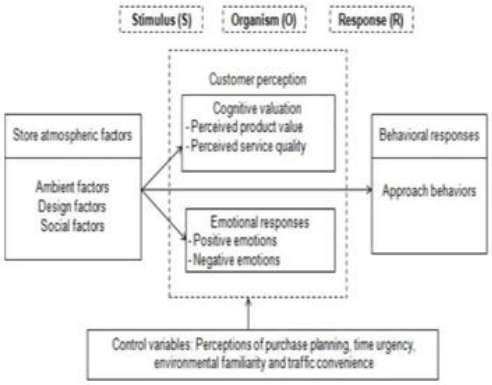

Figure 2.1.1: Research Model of S-O-R model
Source: Mehrabian & Russell. (1974)

2.1.2 Perceived Value Theory

It has long been acknowledged that Perceived Value Theory is essential to understanding customer behavior, adoption choices, and purchase intents. It highlights the trade-offs customers make between what they receive and what they give up, offering a theoretical framework for understanding why people select one good or service over another. Schechter (1984) first introduced perceived value as a multidimensional construct that integrates both quantitative and qualitative components, as well as objective and subjective elements, thereby shaping the consumer's overall consumption

experience. Expanding on this foundation, Zeithaml (1988) proposed the the most widely accepted definition of perceived value is the consumer's overall assessment of a product or service's usefulness, which is based on a trade-off between the advantages and disadvantages. Dodds et al. (1991) further highlighted this ratio-based viewpoint, indicating that adoption choices are influenced by how consumers balance perceived benefits with perceived costs.Among these, Zeithaml's (1988) definition remains central to Perceived Value Theory, as it captures value not only as low price or quality for price paid, but also as the extent to which a product fulfills needs and balances the exchange between what is given and what is received.

Within this theory, scholars distinguish between unidimensional and multidimensional approaches to assessing value. The unidimensional approach focuses on cost- or price-based assessments (Marchand & Hennig-Thurau, 2013), while the multidimensional approach provides a more comprehensive understanding by taking into account cost, quality, advantages, and tradeoffs (Sheth et al., 1991; Chen & Hu, 2010). However, consumer behavior research often emphasizes two dominant categories. The first is functional value, which encompasses utilitarian and tangible attributes such as performance, price, product quality, and ease of use. The second is non-functional value, which reflects intangible aspects such as emotional satisfaction, social recognition, and symbolic meaning (Chen & Hu, 2010). This dual categorization aligns with Perceived Value Theory by illustrating how consumers' evaluations go beyond monetary cost to include both practical and experiential dimensions.

According to Perceived Value Theory, value may be improved by either raising the advantages offered to customers or lowering the expenses related to purchasing and utilizing a product (Lovelock & Wirtz, 2011). While early studies often emphasized the price quality trade-off, the theory highlights that perceived value is rarely determined by these dimensions alone. Perceived value extends to a broader set of factors, including technical performance, convenience, environmental benefits, and social acceptance

particularly in EV. This demonstrates that perceived value is not static but rather shaped by situational and contextual factors, making it a versatile theoretical lens. Research across diverse domains including information systems (Singh et al., 2020), mobile services (Singh et al., 2017), streaming platforms (Shin et al., 2015), and brand behavior (Peng et al., 2014) further validates the applicability of Perceived Value Theory in explaining consumer choices across industries.

In summary, Perceived Value Theory remains a fundamental determinant of consumer decision-making and continues to shape purchase intentions across industries (Li & Petrick, 2008; Tuškej et al., 2013). Its application to EV purchase is particularly critical, as consumers evaluate not only monetary trade-offs but also functional benefits such as charging convenience, performance, and maintenance, alongside non-functional benefits such as environmental contribution and social image. This multidimensional framework reinforces the centrality of Perceived Value Theory as a comprehensive lens to explain consumer purchase intention, highlighting its enduring importance in understanding how individuals perceive and act upon value.

2.2 Review of variables

2.2.1 Availability of Charging Infrastructure (CI)

The availability of charging infrastructure refers to the degree to which people think that sufficient facilities exist to support the adoption of new technologies (Venkatesh, 2003). It plays a particularly important role in shaping consumer acceptance of electric vehicles (EVs). A well-developed charging network reduces uncertainty, increases convenience, and

strengthens confidence in long-term usage. At the early stage of diffusion, access to routine charging options in daily environments such as at home, workplaces, or public facilities has been determined to be a crucial driver of purchase (Hardman et al., 2018). However, the availability of charging points often varies across regions. Countries with higher garage ownership may depend more on private charging, while those with limited household access require a stronger network of public charging infrastructure (Helmus et al., 2018). Beyond daily commutes, fast-charging stations along highways and major travel corridors are also essential to support long-distance trips and reduce range anxiety (Figenbaum & Kolbenstvedt, 2016). Studies further highlight that optimal placement of charging stations should consider travel patterns, service reliability, and sustainability goals (Guo et al., 2015; Davidov et al., 2017). Thus, the availability of charging infrastructure remains a critical factor that significantly influences consumers' willingness to adopt EVs.

2.2.2 Government Support (GS)

Governments across the world implement policies and programs to promote sustainability, enhance living standards, and stimulate economic growth (Heidenreich, 2003; Howells, 2005). In countries where the automotive industry is vital for employment and exports, policies often aim to strengthen competitiveness while encouraging cleaner technologies. Financial incentives remain one of the most effective tools, with subsidies, tax rebates, and reduced ownership costs shown to influence consumer purchasing decisions. For example, differentiated subsidy schemes in the United States (Skerlos & Winebrake, 2010), tax-free purchase incentives in Canada (Potoglou & Kanaroglou, 2007), and ownership tax differentials in Ireland (Rogan et al., 2011) have all supported the purchase of low-emission vehicles. Similar findings in Switzerland and Canada confirm that tax rebates significantly increase hybrid purchase (Chandra et al., 2010). Beyond financial measures, governments also shape consumer awareness

through campaigns highlighting environmental benefits such as emission reduction and air quality improvement (Hao et al., 2014). Additional government strategies, including green marketing, loan programs, and infrastructure investment, further enhance purchase, particularly among younger consumers (Hu et al., 2023). In Malaysia, government support has been identified as a strong predictor of green purchasing behavior, with subsidies and awareness initiatives expected to strengthen interest in sustainable vehicle purchase (Sinnappan & Rahman, 2011).

2.2.3 Price Perception (PP)

Price perception involves both the monetary and non-monetary value that buyers place on a product (Petrick, 2004). According to Zeithaml (1988), the price is the monetary cost, but buyers frequently perceive it as a sign of product quality and worth. Besides, Kukar-Kinney et al. (2007) points out that consumers often rely on internal references prices when evaluating whether a price is fair or acceptable. Emotional response of a customer to a product can be influenced by their perception of its price, which may reveal either positive or negative behavior (Lichtenstein et al., 1993). For instance, a customer's purchasing intentions are positively impacted if they have a favorable pricing perception (Alford & Biswas, 2002). According to Dodds et al. (1991), price perception significantly influences perceived product value and quality, which in turn affects consumers' willingness to purchase. In the context of EV purchase intention, perception of price is how people think about the cost of buying and owning an EV, including initial purchase and long-term economic value.

2.2.4 Environmental Awareness (EA)

Environmental awareness describes a person's level of consciousness and awareness of environmental concerns like climate change, pollution, carbon emissions, and resource depletion, as well as the perceived need of action to preserve the environment (Boermans et al., 2024). Schuitema et al. (2013) further stated that environmental awareness demonstrates a consumer's awareness of environmental issues. Besides, environmental awareness includes both cognitive and emotive dimensions which are knowledge of environmental issues and emotional concern for their effects (Lee, 2008). EA are intended to be similar as environmental concern as it represents the level of concern, empathy, or attention a people have for the environment and the potential damage caused by human conduct. However, environmental knowledge is important since it encompasses a thorough comprehension of concepts and data regarding the environment and its ecosystem (Mostafa, 2006). This involves the understanding of environmental issues, interactions that impact the environment, responsibility for sustainable development, and even awareness of ecological systems (Han, 2021). When it comes to EV, environmental awareness means how much people know about environmental problems and how much they want to do something about them.

2.2.5 Purchase Intention (PI)

Purchase intention is an individual’s expected future behavior and the likelihood that their ideas and attitudes would influence their actions (Engel et al., 1986). Based on Roy et al. (2025), purchase intention refers to a buyer’s willingness to pay money to receive a certain item. In addition, Dodds et al. (1991) define purchase intention as the likelihood that a buyer would buy a product based on their evaluation of value, price, and quality. Their findings underline that perception of value has a substantial influence on customers’ buying. In the setting of EV purchasing intentions, PI stands

for the likelihood of a customer to purchase an EV soon based on their beliefs, attitudes, and external influences.

2.2.6 Perceived Value (PV)

Perceived value plays a critical role in consumer purchase decisions shaping, with higher value perception often leading to more favorable outcomes. This relationship has been widely observed in information technology innovations (Chu et al, 2007; Turel et al, 2010; Yu et al, 2017) and is similarly applicable to electric vehicle (EV) purchasePerceived value in the context of electric cars (EVs) is the total of the emotional, social, environmental, and performance values that buyers attach to buying and utilizing these vehicles. From the consumer's perspective, adopting EVs provides a range of financial, environmental, and psychological benefits (Kim et al, 2018). Consumers generally evaluate these benefits against potential risks, forming perceptions of value that ultimately guide their purchase decisions (Kim et al, 2007). Scholars have categorized perceived value into different dimensions. Wicki et al. (2022) identified perceived values into seven categories of determinants that facilitate battery electric vehicle (EV) acceptance, which comprises technical, contextual, cost-related, sociodemographic, attitudinal and behavioral, social, and EV specific experience.

2.3 Proposed Theoretical/ Conceptual Framework

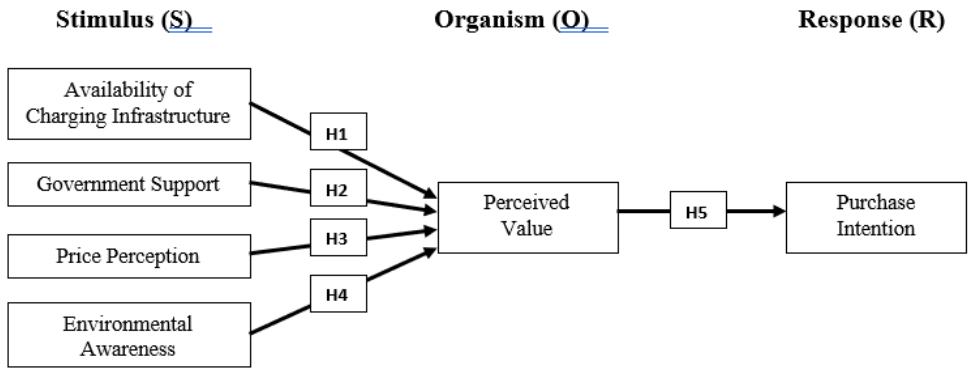

Figure 2.3 Conceptual Framework

Source: Developed from the research

As illustrated in Figure 2.3, which is structured according to SOR model, this study aims to examine the correlation between antecedent factors and Malaysian salaried workers' intention to buy electric vehicles (EVs). Specifically, it explores how the availability of charging infrastructure, government support, price perception, environmental awareness, and perceived value influence the purchase intention of Malaysian salaried workers.

2.4 Hypothesis Development

2.4.1 Availability of Charging Infrastructure and Perceived Value

The availability of charging infrastructure is recognised as the critical factor that affects electric vehicle (EV) purchase decisions. Several studies have shown that consumers tend to be more inclined to purchase EVs when charging infrastructure is conveniently located near their homes or workplaces (Rasouli & Timmermans, 2016). Infrastructure availability has been conceptualised in terms of the ease or difficulty of recharging batteries, particularly the accessibility of charging points (Li et al., 2017). Public

charging infrastructure enhances the attractiveness of EVs by extending the practical driving range, thereby increasing their overall value to both current owners and potential buyers (Peterson & Michalek, 2013). Prior research has also confirmed that consumer purchase decisions are directly tied to the presence of charging facilities (Krupa et al., 2014; Li et al., 2015). Empirical evidence further demonstrates that supportive infrastructure significantly shapes consumer intentions. For instance, facilitating conditions were found to positively influence EV purchase intention in Vietnam (Hoang et al., 2022), while Miranda and Delgado (2020) observed that a more convenient and accessible charging network substantially increases the likelihood of purchase. Similarly, Khazaei and Tareq (2021) noted that consumers who perceive charging facilities as adequate are more willing to consider EV purchases, and Rietmann et al. (2020) reported a positive correlation between charging infrastructure and purchase intentions. Building on these findings, the present study examines whether perceived charging convenience enhances consumers' evaluation of the benefits relative to costs. In other words, sufficient charging infrastructure is expected to increase the perceived value of EVs. Thus, we hypothesize that

H1: Availability of charging infrastructure has a positive influence on perceived value.

2.4.2 Government Support and Perceived Value

Government support is a crucial factor in the promotion of electric vehicles (EVs) in the automotive market, government support is the primary driver and an antecedent variable of perceived behavioral control (Schmalfuß et al., 2017). Government subsidies have been shown to have a major impact on customers' desire to embrace electric vehicles (EVs) in a number of countries, such as China, the US, Germany, and Sweden (Gallagher et al., 2011; Peters et al., 2014; Wang et al., 2015; Egner et al., 2018). For instance, Sobiegalla et al. (2018) highlighted that the government incentives, alongside individuals' prior battery electric vehicle (BEV)

experiences, can positively shape future EV purchasing decisions. Among the many policy measures, financial incentives particularly tax reductions are considered the most effective tools to stimulate EV purchase (Hoen & Koetse, 2014; Xue et al., 2021). By lowering purchase, usage, and road taxes, governments can reduce the financial burden on consumers, counterbalance cost transfers from profit-driven manufacturers, and make EVs more attractive (Wang & Liu, 2015). Whitehead et al. (2019) further demonstrated that government incentives are strongly associated with perceived behavioural control, indicating that supportive policies enhance consumers' confidence and intention to purchase green vehicles. Overall, prior research consistently shows that government policies especially financial incentives not only reduce economic barriers but also increase consumers' evaluation of the benefits they gain relative to the costs. This suggests that government support significantly enhances consumers' perceived value of purchasing EVs (Shin et al., 2019). Thus, we hypothesize that

H2: Government Support has a positive influence on perceived value

2.4.3 Price Perception and Perceived Value

Based on Egbue et al. (2017), consumer willingness to buy a new product is influenced by perceived fees. In this case of EVs, this includes the real price and home charging fees. Studies show that the high cost is the main reason people don't buy electric cars (Adepetu & Keshav, 2015; Lebeau et al., 2013). According to Thananusak et al. (2017), they also stated that pricing is the most important factor when it comes to green vehicles because they are generally costly, which will discourage people from buying them. Because EVs are an innovative product, their prices are greater than total fuel vehicles because of R&D and production costs (Lieven et al., 2011). In addition, the price of EVs was mostly due to their expensive batteries and the fact that they didn't have any economies of scale (Levay et al., 2017). Zhang et al. (2022) pointed out that when the battery goes bad, customers have to pay a lot of money for repairs. Electric vehicles (EVs) aren't as

popular as regular cars, which have an extensive and long-lasting production run, make it hard to produce more in a period and lead the pricing cost of EVs to be high (Franke & Krems, 2013). Moreover, EVs incur higher service and repair costs than conventional vehicles, which leads to higher rates for insurance for these vehicles (Krishna, 2021). Thus, we hypothesize that

H3: Price perception has a negative influence on perceived value

2.4.4 Environmental Awareness and Perceived Value

Environmental Awareness is a type of mind that involves problems with the environment, solutions, tactics, as well as plans for addressing them (Wang et al., 2014). The main objective of the global community is lowering CO2 emissions that are causing global warming. Each nation is making every effort to resolve this issue. If individuals are conscious of the consequences of this matter, they may exercise an important influence at the individual level (Mustafa et al., 2024). According to Paul et al. (2016), people who are aware of the environment are more willing to do things that help stop global warming. Hamzah & Tanwir (2020) mentioned that consumers who care about the environment are more likely to choose fuel-free cars since they see it as a means of protecting the environment. Concerns about the environment are linked to a desire to buy, according to Kim et al. (2018). They also found that environmental issues impact customers' perceived value. Besides, He et al. (2012) stated that consumers' primary motivation to purchase and utilize electric vehicles is because of their perception that doing so will reduce air pollution and protect the environment. In addition, Yang & Lan (2023) mentioned that customers environmental awareness influences their purchasing intentions. Moreover, there are also past studies that have stated that environmental awareness has a major impact on EV purchase intentions. In light of this, we hypothesized that

H4: Environmental Awareness has a positive influence on perceived value

2.4.5 Perceived Value and Purchase Intention

The perceived value (PV) is the main thing that affects how people buy things. This idea is linked to the overall evaluation of how satisfied a customer is with the goods and services (Patterson & Spreng, 1997). Based on Zeithaml (1988), perceived value is a product's overall assessment based on comparison between perceived benefits and perceived sacrifices, and higher perceived value leads to stronger purchase intention. Moosa & Hassan (2015) states that perceived value significantly influences customer purchase decision-making, leading to the purchase of products with high perceived value. Additionally, research within the context of perceived value theory has demonstrated that this factor directly influences individuals' willingness to use wearable technology (Yang et al., 2016), mobile health services (Deng et al., 2014), public transportation (Lai & Chen, 2011), and electro-mobility vehicles (Jiang, 2016). Additionally, Arora & Manchanda (2022) discovered a strong correlation between consumers' favorable attitudes toward sustainable shopping and their perception of the worth of the environment. Customers' willingness to buy is strongly correlated with their perception of value; in particular, a rise in perceived value within a certain dimension would improve customers' readiness to buy (Yang & Lan, 2023). Based on earlier studies, we hypothesize that when customers recognize a significant value in EVs, their purchase intentions would increase. Hence, we hypothesize that

H5: Perceived Value has a positive influence on purchase intention

2.5 Conclusion

In summary, this chapter presented a full review of the theoretical framework, a detailed look at the variables, and a detailed explanation of the hypotheses.

Additionally, the literature highlights that external stimuli play important roles in shaping perceived value and purchase intention towards EVs.

CHAPTER 3: METHODOLOGY

3.0 Introduction

The following parts provide a full overview of the research techniques, including its objectives, design, and method of execution,

3.1 Research design

The current research employs a quantitative research methodology to analyses the elements influencing customers' purchase intentions for electric vehicles in Malaysia. The quantitative method is suitable as it enables statistical study of relationships among variables and supports the application of findings to a broader population (Creswell & Creswell, 2018). The suggested framework is based on the Stimulus-Organism-Reaction (SOR) model. In this model, the independent

variables are stimuli, perceived value is the organism, and purchase intention is the reaction.

Besides, a descriptive study approach is used to better understand current customer perceptions, attitudes, and EVs intention, specifically regarding the availability of charging infrastructure, price perceptions, environmental awareness, and government support. Descriptive research is suitable since it enables researchers to systematically summarize and describe the characteristics of a given population, hence enabling the identification of trends and patterns (Zikmund et al., 2013). Therefore, using this approach help us to study and interpret the factors affecting Malaysians' intentions to purchase EVs.

3.2 Sampling Design

Researchers use sampling design to choose people from the target population in a way that makes sure the sample is a good representation of the group being investigated. A well-organized sampling design reduces bias, makes the sample more representative, and makes research results more valid (Sekaran & Bougie, 2019). Etikan & Bala (2017) points out that the sample method chosen should strike a balance between representativeness and feasibility, especially when respondents' accessibility is limited.

3.2.1 Target population

This study targets Malaysian paid workers who may buy private cars and have not yet used any EVs. Salaried workers are chosen because they have consistent monthly earnings and can afford high-value products like electric vehicles. Besides, salaried workers make up a large percentage of Malaysia's middle class, which EV producers and officials are targeting to

boost purchase. Income stability and employment type affect EV affordability and perceived value, which influence customer purchase intention (Rezvani et al., 2015). According to Bank Simpanan Nasional (2025), the minimum monthly income requirement for EV/HEV financing eligibility is RM5,000. Therefore, this research aims to collect responses from Malaysian salaried workers who earn RM5,000 and above per month only. This demographic is more likely to adopt new technology like EVs due to their financial resources, information access, and environmental awareness (Pamidimukkala et al., 2024).

3.2.2 Sampling frame

In this study, the sampling frame is unavailable and inaccessible due to the large diversity of TikTok users from Generation Z. Since it is not possible to get information on every Gen Z's TikTok users in Malaysia, this study uses non-probability sampling to collect data from a smaller group of them.

3.2.3 Sampling Location

This study will focus on the sample in cities and semi-urban areas of Malaysia, where the likelihood of purchasing an EV is greater due to greater infrastructure, more purchasing power, and greater environmental consciousness among consumers. Key cities like Kuala Lumpur, Selangor, Penang, and Johor Bahru are prioritized as these cities represent Malaysia's economic centers with a high concentration of salaried workers, who form the target respondents for this study (Jo, 2024). These states were selected as the focus because they are highly developed regions with greater infrastructure readiness, higher technological adoption rates, and stronger purchasing power (Rasiah, 2007; Yusof et al., 2024).

3.2.4 Sampling Technique

The current research implements the non-probability sampling method. Smith (2012) claimed that non-probability sampling practices are utilized when determining the quantity of elements in the target population is impractical. This study employs purposive or judgmental sampling approaches to conserve time and resources. One type of non-probability sampling is purposeful sampling, in which units are carefully picked for a specific reason. Daniel (2011) explains that in purposeful sampling, the researcher chooses the parts on purpose because they meet certain criteria for being included or left out of the study. The criteria in this study focus on individuals who have not yet purchased an electric vehicle, as this group is more appropriate for examining purchase intention prior to actual adoption, thereby ensuring that responses reflect pre-purchase decision-making rather than post-adoption experiences (Ajzen, 1991). Additionally, the individual who aged between 18-60 with a valid driving license and stable income. In Malaysia, the minimum legal age to purchase and operate a vehicle is 18, as persons must first receive a complete driving license under the Road Transport Act 1987. The highest limit of 60 years matches the conventional retirement age in Malaysia, as established by the Minimum Retirement Age Act 2012, which typically signals the end of salaried employment and regular income. Therefore, targeting individuals aged 18-60 guarantees that the respondents are legally qualified drivers, financially secure, and part of the active consumer group relevant to EV purchasing decisions. Amin & Tarun (2022) also mentioned that this technique focuses on a particular of people who could be able to provide the desired survey data. Because the sample frame is not available, non-probability sampling is selected instead of probability sampling.

3.2.5 Sample size

Establishing a suitable number of samples is important for ensuring the reliability and validity of study outcomes. Based on Sekaran and Bougie (2019), sample size must be sufficiently high to accurately represent the target population while considering resource limitations. In behavioral and consumer research, researchers frequently use sample size determinations recommendations, such as Krejcie and Morgan's (1970) table, which offers recommended sample sizes according to population size at a 95% confidence level. The target population for this study involve Malaysia salaried workers. A representative sample is necessary due to the substantial population of salaried workers nationwide. As of December 2024, the total number of employed persons in Malaysia reached approximately 16.78 million (Department of Statistics Malaysia, 2025). For a population of several million, Krejcie and Morgan (1970) recommend at least 384 respondents in order to provide results that can be applied generally. This threshold aligns with similar EV purchase intention studies, which typically use sample sizes ranging from 300 to 500 respondents to guarantee adequate statistical power and robustness in structural equation modeling (Rezvani et al., 2015). This study will focus on a sample size of 384 respondents, considered sufficient for doing accurate analysis and obtaining accurate conclusions about the factors affecting EV purchase intension.

3.3 Data collection method

3.3.1 Primary Data

First-hand information gathered directly by researchers to solve a particular issue is referred to as primary data (Hox & Boeije, 2005). Because it offers

unique insights that are suited to the goals of the research, it is regarded as trustworthy. Although a variety of methods, including surveys, interviews, and observations, might be employed, a questionnaire was selected as the primary instrument for this investigation (Ajayi, 2017).

Questionnaires are widely recognized as cost-effective and efficient. They consist of predetermined questions designed to capture respondents' views and attitudes in a structured way (Roopa & Rani, 2012). This research applies a self-administered questionnaire, participants are allowed to fill up independently and gives respondents the flexibility to answer to enhance reliability (Mathers et al., 2007).

To optimize accessibility, the online survey is disseminated using Google Forms via email, social media, and QR codes. A total of 384 respondents, specifically Malaysian paid workers making RM5,000 or more a month will be targeted. This guarantees that the study includes the viewpoints of those who really meet the requirements to acquire an EV.

3.3.2 Questionnaire Design

In order to support the study's goals, the questionnaire was divided into three sections. Section A included four pre-screening questions to ensure respondents met the eligibility criteria in terms of age, income, employment, driving license, and workplace, making them the most relevant locations to study electric vehicle (EV) purchase intention. Only those who fulfilled these requirements were allowed to move on to the following phases. Six questions addressing gender, age group, education level, work status, monthly income, and residence location were used in Section B to collect demographic data. This information provided contextual insights into respondents' background characteristics and allowed comparisons across different demographic groups.

Section C formed the core of the questionnaire and measured both independent and dependent variables. The independent variables included availability of charging infrastructure (CI), government support (GS), price perception (PP), environmental awareness (EA), and perceived value (PV). Each independent variable was measured using four questions adapted from established scales in previous studies to ensure content validity while being contextualized to the Malaysian EV setting. The dependent variable, purchase intention (PI), was also measured using four questions, capturing respondents' future likelihood of purchasing and recommending EVs.

All questions in Section C were measured using a five-point Likert scale, which allowed respondents to express the degree of their agreement or disagreement with each statement. The scale was anchored as follows: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The five-point scale was chosen because it is widely recognized in social science research for its clarity, ease of understanding, and ability to capture nuanced attitudes and perceptions (Krosnick, 2017). Moreover, Adelson and McCoach (2010) noted that the five-point scale demonstrates stronger psychometric properties and reliability compared to four-point scales.

In total, the questionnaire contained 34 questions: 4 pre-screening questions, 6 demographic questions, and 24 questions measuring the independent and dependent variables. The survey was delivered via Google Forms and shared through physical approach, social media platforms and email, enabling convenient participation for respondents while ensuring a broader reach within West Malaysia.

3.3.3 Pretest

Pre-testing is an essential step in questionnaire development to guarantee accuracy of data, identify potential error, and minimize errors before

distributing the questionnaire to the target demographic (Colbert et al., 2019). It allows researchers to evaluate the validity, reliability, and comprehensiveness of survey items, while also identifying typographical mistakes, unclear wording, or structural weaknesses that may affect respondent understanding (Reynolds et al., 1993).

In this study, the draft questionnaire was evaluated by 3 academic professionals to guarantee internal consistency and accuracy. Specifically, three specialists from UTAR's Department of Marketing provided feedback on the survey. Their evaluation confirmed that the questionnaire was sufficient to meet the research objectives but suggested several improvements. Based on their recommendations, revisions were made to correct grammatical errors and simplify confusing sentence structures. These adjustments helped refine the questionnaire, ensuring clarity and reliability. The final version, incorporating all expert feedback, was then used for distribution.

3.3.4 Pilot Study

A pilot study, as recommended by Whitehead et al. (2015), with at least thirty participants, is conducted after a pretest to discover and rectify any shortcomings within a questionnaire prior to its distribution. Besides, Lowe (2019) explains pilot study as an initial feasibility study that evaluates many aspects of a suggested approach for a more complete of confirmatory examination. To guarantee the stability of all measurement variables, a reliability study was undergone on a pilot sample of thirty responses. This PLS-SEM reliability study found acceptable reliability for all 30 sets of responses, allowing for further research.

Table 3.3.4: Reliability Analysis for Pilot Test

Construct	Cronbach's Alpha	Composite Reliability
CI	0.965	0.97
EA	0.918	0.926
GS	0.948	0.952
PI	0.936	0.939
PP	0.849	0.849
PV	0.921	0.933

Source: Developed for pilot study

3.4 Proposed Data Analysis Tool

3.4.1 Descriptive Analysis

This study uses descriptive analysis to describe and explain the demographic traits of the respondents and how they generally feel about electric vehicles (EVs). This method is a basic yet useful way to turn big collections of data into useful information, like frequency distribution, percentages, means, and standard deviation (Sekaran & Bougie, 2019). Descriptive analysis lets researchers get a first look at the sample profile, which includes things like age, gender, income level, job and knowledge about EVs.

3.4.2 Partial Least Squares Structural Equation Modelling

In this study, PLS-SEM (Partial Least Squares Structural Equation Modelling) will be adopted, employing SmartPLS 4.0 as the primary data analysis instrument. PLS-SEM is suitable as the study framework includes several latent components and hypothesized relationships, including both cognitive and affective factors. PLS-SEM is better for exploratory research, investigations that are based on predictions, and when working with smaller sample sizes or more complex models than covariance-based SEM (Hair et al., 2019).

3.4.3 Outer Measurement Model

The goal of the measurement model evaluation is to find out if the constructs utilized in this investigation are valid and reliable. Based on Hair et al (2019), to examine indicator reliability, items with loadings more than 0.70 may be maintained if the construct's dependability remains high. Internal consistency reliability will be assessed using Composite Reliability (CR). Values exceeding 0.70 are regarded as acceptable. The Average Variance Extracted (AVE) will be employed to evaluate its convergent validity. Values of 0.50 or higher suggest that the construct is responsible for at least half of the variance in its indicator. In addition, the Fornell-Larcker Criterion is employed to evaluate discriminant validity by comparing the square root of a construct's AVE to its correlations with other constructs (Henseler et al., 2015).

3.4.4 Inner Measurement Model

After the measurement model has been checked, the structural model will be observed to see if the suggested relationships between constructs are valid. Variance inflation factors (VIF) are used to check the collinearity of formative indicators. VIF scores of 5 or higher show that there are serious collinearity problems between the indicators of formatively measured constructs. In addition, the strength and direction of these interactions are determined by path coefficients, and bootstrapping approach will be used to check for statistical significance, with t-values above 1.96 and p-values under 0.05 being the threshold. A smaller standard deviation suggests more credible estimations, whereas a higher standard deviation indicates greater uncertainty. A P-value often below 0.05, is utilized to determine the significance in research (Dunker et al., 2019). The model's explanatory strength will be assessed using the Coefficient of Determination (R^2) with values of 0.25, 0.50, and 0.755 indicating weak, moderate, and strong explanatory power respectively.

3.5 Conclusion

In a nutshell this section describes the sampling methodologies and analysis methods in an organized way, giving a full explanation of how the data was collected.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

Initially, this chapter begins with a descriptive examination of respondents' demographic features, accompanied by an analysis of the measurement model via PLS-SEM.

4.1 Demographics of Targeted Respondents

This study's respondents' demographic characteristics contain variables such as gender, age group, level of education, job status, monthly earnings, and residential location. There are total of 385 respondents collected in this study. The table below shows a summary of demographic distribution, with percentages for each variable.

Table 4.1: Demographic summary table

Demographic Profile	Categories	Frequency	Percentage (%)
Gender	Male	114	29.6
	Female	128	33.2
	Prefer not to say	143	37.1
Age	18-30	86	22.3
	31-40	94	24.4
	41-50	84	21.8
	51-60	121	31.4
Highest Education Level	Secondary School	68	17.7
	Diploma	64	16.6
	Bachelor's Degree	61	15.8
	Master’s Degree	59	15.3
	Doctorate (PhD)	64	16.6
	Others	69	17.9
Employment Status	Full -time salaried	204	53
	Part-time salaried	0	0
	Self-employed	181	47
Monthly Income Range	RM5,000 - RM6,999	101	26.2
	RM7,000 - RM8,999	83	21.6
	RM9,000 - RM10,999	97	25.2
	RM11,000 and above	104	27
Residential Location	Kuala Lumpur	95	24.7
	Selangor	82	21.3
	Penang	105	27.3
	Johor	103	26.8

Source: Developed for research

The respondents' demographic characteristics in this study reflects Malaysia's primary target market for Electric Vehicles (EVs). According to market analysis by Lee (2025), the average monthly income of current EV owners in Malaysia is at RM11,114 while those with a high buy intention earn around RM9.096. Given that over half of the study's participants earned more than RM9,000 a month, they have financial resources to overcome the "perceived fee" and high upfront cost that are frequently highlighted as main obstacles to EV in emerging markets (Pamidimukkala et al., 2024). Furthermore, the geographic concentration of respondents in major urban hubs like Kuala Lumpur, Selangor, Penang, and Johor has strategic implications where over 60 % of chargers are concentrated in these areas (Mutian et al., 2025). Besides, this survey has major mature age profile and high education levels where research indicates that high educated middle-aged consumers often possess greater environmental concern (Fitriningrum, 2024).

4.2 Measurement Model Assessment

4.2.1 Reliability Analysis

The reliability analysis outcomes from 385 valid measurements are presented in Table 4.2. Based on the table, every construct received a score higher than the suggested threshold of 0.70 for both Cronbach's Alpha (CA) and Composite Reliability (CR) where CR measures the overall reliability of a latent construct (Shrestha, 2021). This shows that the constructs in the measurement model are reliable and consistent with each other.

Table 4.2: Reliability Analysis Data

Construct	Cronbach's Alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
CI	0.883	0.884	0.927
EA	0.921	0.921	0.944
GS	0.893	0.893	0.933
PI	0.912	0.912	0.938
PP	0.898	0.899	0.937
PV	0.91	0.91	0.937

Source: Developed for research

Note: CI = Charging Infrastructure, EA = Environmental Awareness, GS = Government Support, PI = Purchase Intention, PP = Price Perception, PV = Perceived Value

4.2.2 Validity Analysis

4.2.2.1 Convergent Validity

When several indicators of the same underlying concept are strongly linked to each other and "converge" to explain a large portion of shared variance, this is called convergent validity (Hair et al., 2021). It is necessary for each part of a measurement model to have an AVE of 0.50 or higher to show convergent validity. This means that the latent variable explains more than half of the variation in its indicators (Fornell & Larcker, 1981). Table 4.3 shows that all of the constructs in this study achieve convergent validity, which means that their AVE values are higher than the minimum level of 0.50. This means that the constructs are correctly evaluated by their indicators.

Table 4.3: Average Variance Extracted (AVE)

Construct	Average variance extracted (AVE)
CI	0.81
EA	0.809
GS	0.823
PI	0.791
PP	0.831
PV	0.788

Source: Developed for research

Note: CI = Charging Infrastructure, EA = Environmental Awareness, GS = Government Support, PI = Purchase Intention, PP = Price Perception, PV = Perceived Value

4.2.2.2 Discriminant Validity

Hair et al. (2019) characterize discriminant validity as the extent to which a concept within a model can be empirically distinguished from other components. This study employs the Fornell-Larcker criterion and cross-loading evaluation as common methods to examine this requirement within the structural model.

The initial level of evaluation is the cross-loading criteria. According to Hair et al. (2021), an indicator's outer loading on the construct to which it is allocated must be bigger than all of its loadings on other constructs. However, in the initial stage of analysis, two items particularly those representing Charging Infrastructure (CI) and Government Support (GS) exhibited high cross-loadings. This showed that these items were leading to statistical "noise" and were not unique to any single construct. These

misleading signs were removed from the construct to deal with this issue. The distinctiveness of the indicators at the item level was verified by this refinement, thereby making sure that each remaining item loaded most strongly on its designated latent variable. As a result, all of the bolded outer loading values for the constructs in Table 4.4 are above the corresponding cross-loading on other constructs after refining.

Table 4.4: Cross-loading

	CI	EA	GS	PI	PP	PV
CI1	**0.886**	0.782	0.775	0.791	0.795	0.776
CI3	**0.915**	0.809	0.808	0.786	0.787	0.827
CI4	**0.899**	0.806	0.786	0.771	0.78	0.801
EA1	0.79	**0.898**	0.784	0.746	0.745	0.797
EA2	0.802	**0.899**	0.784	0.769	0.777	0.811
EA3	0.8	**0.9**	0.778	0.768	0.77	0.811
EA4	0.803	**0.901**	0.781	0.743	0.754	0.804
GS1	0.796	0.778	**0.912**	0.761	0.773	0.799
GS2	0.804	0.795	**0.908**	0.753	0.778	0.828
GS4	0.789	0.793	**0.902**	0.782	0.784	0.806
PI1	0.778	0.755	0.764	**0.893**	0.77	0.792
PI2	0.753	0.723	0.719	**0.888**	0.782	0.768
PI3	0.774	0.768	0.772	**0.885**	0.738	0.766
PI4	0.789	0.747	0.746	**0.891**	0.748	0.76
PP1	0.83	0.791	0.793	0.788	**0.921**	0.826
PP2	0.784	0.762	0.781	0.779	**0.902**	0.799
PP3	0.774	0.761	0.771	0.767	**0.912**	0.775
PV1	0.789	0.799	0.778	0.79	0.778	**0.892**
PV2	0.782	0.787	0.786	0.771	0.795	**0.879**
PV3	0.798	0.802	0.795	0.758	0.772	**0.897**
PV4	0.793	0.792	0.816	0.761	0.773	**0.881**

Source: Developed for research

Note: CI = Charging Infrastructure, EA = Environmental Awareness, GS = Government Support, PI = Purchase Intention, PP = Price Perception, PV = Perceived Value

In addition, Fornell-Larcker criterion are accessed where each construct's square root of the Average Variance Extracted (AVE) is compared to its correlations with other constructs (Fornell & Larcker, 1981). When the square root of a construct's AVE is greater than its correlation with other constructs in the model, it has discriminant validity (Afthanorhan et al., 2021. However, this criterion was not met as the square root of the AVE for the two constructs was smaller than their correlation with the model's other latent variables. Such violation indicates that a construct has higher variance with other variables than with its own indicators (Fornell & Larcker, 1981).

To ensure statistical hygiene, items that contributed to strong inter-construct correlations were removed. Consequently, Table 4.5 reveals that the square root of the AVE for each construct in this study is higher than its correlation with other constructs. This means that discriminant validity had been reached after refining.

Table 4.5 : Fornell-Larcker

	CI	EA	GS	PI	PP	PV
CI	**0.9**					
EA	0.888	**0.9**				
GS	0.877	0.869	**0.907**			
PI	0.869	0.841	0.844	**0.89**		
PP	0.874	0.846	0.858	0.854	**0.912**	
PV	0.891	0.896	0.894	0.868	0.878	**0.887**

Source: Developed for research

Note: CI = Charging Infrastructure, EA = Environmental Awareness, GS = Government Support, PI = Purchase Intention, PP = Price Perception, PV = Perceived Value

4.3 Structural Model Assessment

4.3.1 Variance Inflation Factor (VIF)

Hair et al. (2021) state that VIF examine how much collinearity with other predictor variables increases the variance of a regression coefficient. All VIF values should be below 3.0 to maintain statistical consistency and prevent bias in model results, but values up to 5.0 are acceptable in some research scenarios (Hair et al., 2022). Each set of predictor constructs in this research was analysed and the corresponding VIF values are presented in Table 4.6.

Table 4.6: VIF

	VIF
CI1	2.297
CI3	2.749
CI4	2.497
EA1	3.043
EA2	3.033
EA3	3.048
EA4	3.090
GS1	2.792
GS2	2.636
GS4	2.558
PI1	2.814
PI2	2.761
PI3	2.705
PI4	2.834
PP1	2.978
PP2	2.538
PP3	2.879
PV1	2.83
PV2	2.571
PV3	2.96
PV4	2.617

Source: Developed for research

Note: CI = Charging Infrastructure, EA = Environmental Awareness, GS = Government Support, PI = Purchase Intention, PP = Price Perception, PV = Perceived Value

4.3.2 Path Coefficient

Moreover, Table 4.7 also shows the structural model assessment findings, containing the path coefficient, T-statistics, and P-values derived during the bootstrapping process. The report discovered that Environmental Awareness (EA) had the most direct impact on Perceived Value (PV) ($\beta = 0.300$, $T = 6.545$, $P = 0.000$). This is closely followed by Government Support (GS) (β

=0.285, T = 6.685, P = 0.000) and Perceived Price (PP) (β = 0.223, T = 5.388, P = 0.000), both of which have significant and favorable impact on perceived value. Furthermore, Charging Infrastructure (CI) has a substantial positive effect on perceived values (β = 0.179, T = 3.580, P = 0.000). Therefore, all coefficients of paths are statistically relevant at the 0.001 level (P < 0.05), which strengthens up the predictions made in Chapter 2.

Table 4.7: Path Coefficient

Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Significance
CI -> PV	0.179	0.177	0.05	3.58	0.000	**Yes**
EA -> PV	0.3	0.301	0.046	6.545	0.000	**Yes**
GS -> PV	0.285	0.285	0.043	6.685	0.000	**Yes**
PP -> PV	0.223	0.224	0.041	5.388	0.000	**Yes**
PV -> PI	0.868	0.867	0.024	35.804	0.000	**Yes**

Source: Developed for research

Note: CI = Charging Infrastructure, EA = Environmental Awareness, GS = Government Support, PI = Purchase Intention, PP = Price Perception, PV = Perceived Value

4.3.3 Coefficient of Determination (R^2)

The model's predictive capability is assessed by the Coefficient of Determination (R^2). It reveals the percentage of a dependent variable's variability that can be clarified by independent variables (Gupta et al., 2024). The R^2 value for Perceived Value (PV) is 0.879, as seen in Table 4.8, meaning that 87.9% of the variance in Malaysian salaried workers' perceptions of an EV's value can be explained by each of the variables taken together. Additionally, the R^2 value for Purchase Intention (PI) serves as 0.753, which means that the model explains 75.3% of the differences in consumer intentions to buy an electric car.

Table 4.8: Coefficient of Determination (R^2)

Construct	R-square
PI	0.753
PV	0.879

Source: Developed for research

Note: PI = Purchase Intention, PV = Perceived Value

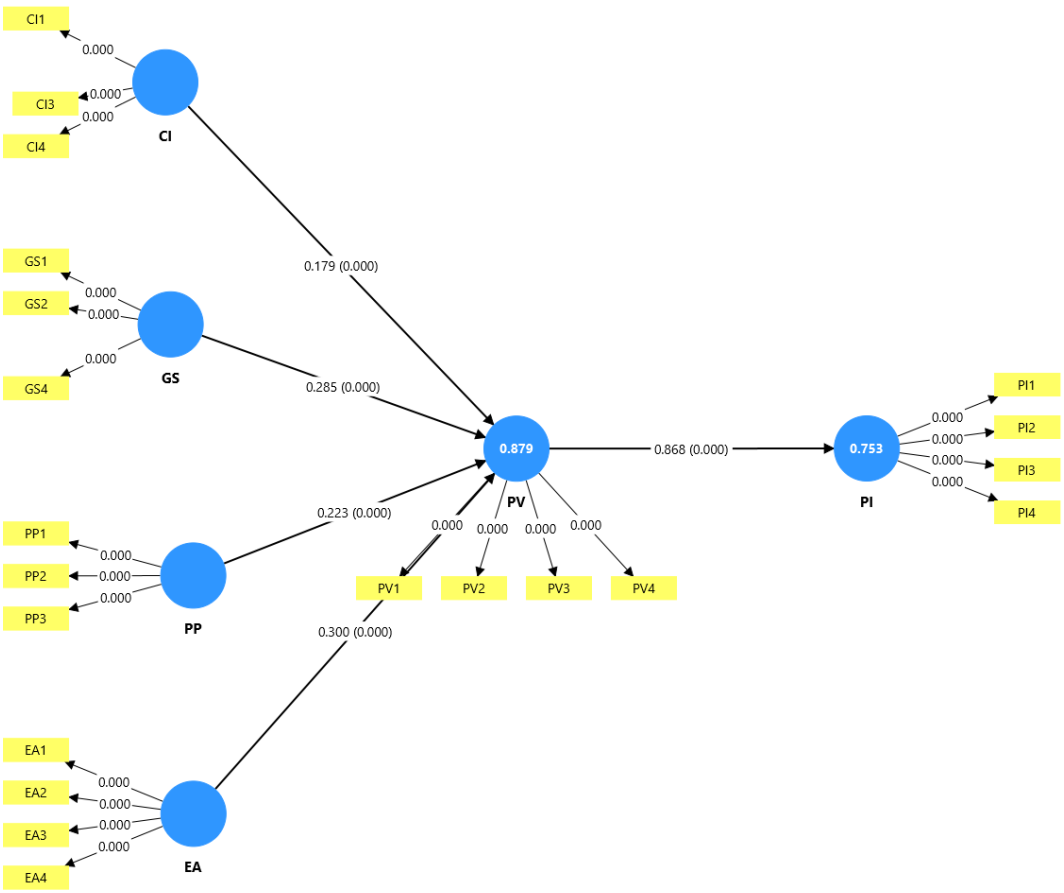

Figure 4.1. SMART-PLS 4 Model

Source: Developed for research

4.4 Conclusion

Path coefficients, convergent validity, discriminant validity, and reliability measurements were the key metrics employed for the analysis. The study's hypotheses were all tested, and the table above shows the results.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

This section shows the main research results and elaborates on the statistical analysis that was done to meet the research goals. The chapter also talks about the theoretical and managerial implications of the results as well as the problems arise up during the study process. On top of that, thoughts for future research are given to help guide future studies in this area.

This chapter is split into a few sections such as achievement of objectives of research and discussion of findings, implications of the research to theory and practice, study's limits, thoughts for future research, and finally the conclusion.

5.1 Summary of Statistical Analysis

The findings from the hypothesis tests (H1–H5) have been consolidated and are shown in Table 5.1.

Table 5.1: Results of Hypothesis Testing

	Hypothesis	Result
H1	*Availability of charging infrastructure has a positive influence on perceived value.*	**Supported**
H2	*Government Support has a positive influence on perceived value*	**Supported**
H3	*Price perception has a negative influence on perceived value*	**Supported**
H4	*Environmental Awareness has a positive influence on perceived value*	**Supported**
H5	*Perceived Value has a positive influence on purchase intention*	**Supported**

Source: Developed from the research

5.2 Discussions of major findings

5.2.1 Availability of Charging Infrastructure and Perceived Value

H1: The Relationship Between Availability of Charging Infrastructure and Perceived Value

The result supports H1's prediction, which suggests a significant positive relationship between availability of charging infrastructure and perceived value among Malaysian salaried workers. Syed Mansor and Anuar (2025) found that limited availability and accessibility of charging stations remain one of the main concerns affecting consumers' evaluation and acceptance of electric vehicles, indicating that better infrastructure can increase perceived benefits and overall value. In addition, research by Permana and Wisnalmawati (2025) reported that charging infrastructure is closely related to consumer perceived value, as insufficient charging facilities may create

range anxiety and reduce confidence in purchase electric vehicles. When charging stations are widely available and reliable, consumers tend to perceive electric vehicles as more convenient and useful, which enhances their perceived value. Thus, H1 is supported.

5.2.2 Government Support and Perceived Value

H2: The Relationship Between Government Support and Perceived Value

The result supports H2's prediction, which suggests that government support has a significant positive influence on perceived value among Malaysian salaried workers. According to Hardman et al. (2017), financial incentives such as subsidies, tax reductions, and rebates can improve consumers' evaluation of electric vehicles by lowering the purchase cost and increasing the overall perceived value. When the government provides support, consumers are more likely to purchase electric vehicles because it increases the perceived benefits while reducing the financial burden associated with new technology. In addition, Rezvani et al. (2015) stated that government policies, including incentive programs and promotional support, positively influence consumer perception and acceptance of electric vehicles. Furthermore, policy incentives significantly enhance consumers' perceived value and intention to adopt electric vehicles, especially when the support helps reduce cost concerns and improves accessibility (Wang et al., 2017). These supports increase consumer confidence and reduce uncertainty toward electric vehicles, which positively leads to higher perceived value. Thus, H2 is supported.

5.2.3 Price Perception and Perceived Value

H3: The Relationship Between Price Perception and Perceived Value

The result supports H3's prediction, which suggests that price perception has a negative influence on perceived value among Malaysian salaried workers. According to Zeithaml (1988), perceived value is based on the comparison between perceived benefits and perceived price, where a higher price perception may lower the overall value. Price perception affects how consumers evaluate the benefits of electric vehicles, as higher perceived cost may reduce the overall value received. In addition, the high purchase price of electric vehicles is one of the main barriers to purchase, as consumers often compare cost with perceived value before making a decision (Sierzchula et al., 2014). Similarly, cost-related concerns negatively affect consumer perception toward electric vehicles, where higher perceived price reduces attractiveness and lowers perceived value (Rezvani et al., 2015). Therefore, when the price of electric vehicles is too high, their perceived value will decrease. Thus, H3 is supported.

5.2.4 Environmental Awareness and Perceived Value

H4: The Relationship Between Environmental Awareness and Perceived Value

The result supports H4's prediction, which suggests that environmental awareness has a positive influence on perceived value toward electric vehicles among Malaysian salaried workers. According to Rezvani et al. (2015), environmental concern is one of the key factors influencing consumer purchase of electric vehicles, as these vehicles reduce environmental impact and are perceived as valuable. In addition, environmental benefits can increase the consumers' willingness and

attractiveness to purchase electric vehicles, as individuals who prioritize sustainability tend to evaluate eco-friendly vehicles more positively, which leads to higher perceived value (Tay and Nga, 2024; Sierzchula et al., 2014). Higher environmental concern increases the perceived advantages of electric vehicles. Therefore, environmental awareness can be considered an important factor that increases perceived value. Thus, H4 is supported.

5.2.5 Perceived Value and Purchase Intention

H5: The Relationship Between Perceived Value and Purchase Intention

The result supports H5's prediction, which suggests that perceived value has a positive influence on purchase intention toward electric vehicles among Malaysian salaried workers. Wang and Li (2018) found that perceived value impact on consumers' intention to purchase electric vehicles, as higher functional, economic, and environmental benefits increase the likelihood of purchase. Consumers tend to show stronger purchase intention when they believe electric vehicles provide long-term advantages compared to conventional vehicles. Furthermore, perceived value positively influences consumers' behavioral intention toward eco-friendly products, including electric vehicles. When a higher overall value is perceived by consumers, it increases the willingness to accept new technology and make a purchase decision (Choi et al., 2018). Therefore, perceived value is an important predictor of purchase intention. Thus, H5 is supported.

5.3 Practical Implication

5.3.1 Theoretical Implications

This research enhances the existing literature on electric vehicle (EV) purchase intention by improving the application of the SOR model to the topic of sustainable mobility. Specifically, the study considers the availability of charging infrastructure, price perception, environmental awareness, and government support as external stimuli that influence customers' internal evaluations, represented by perceived value, which leads to purchase intention. By combining these variables into an integrated framework, the research offers a better knowledge of how environmental, economic, and regulatory factors interact to influence consumer' behavioral intentions towards EV purchase.

Furthermore, this study improves the theoretical framework of consumer behavior in green technology adoption by empirically confirming perceived value within the SOR model. Previous research has often concentrated on a direct correlation between influencing factors and purchasing intention, this study shows that these interactions are better explained by consumers' value appraisal processes. This emphasizes the role of cognitive appraisal in affecting behavioral outcomes and increases the SOR framework's explanatory potential for understanding sustainable consumption behavior.

5.3.2 Practical Implications

This investigation has significant practical implications for policymakers, automobile manufacturers, and infrastructure providers in Malaysia's electric vehicle (EV) industry. The findings can help policymakers understand how factors like charging infrastructure availability, price

perception, environmental awareness, and government support affect customers' perceived value and purchase intention. This knowledge can help to shape more effective regulations, financial incentives, and awareness efforts to promote EV purchase and support Malaysia's sustainability and carbon reduction objectives. First, policymakers could develop targeted initiatives to increase consumer's perceived value of EVs based on government support and environmental awareness. For example, to reduce the initial cost, the government may offer continual financial incentives like tax breaks, rebates, or subsidies, to improve price perception and raise perceived value. Furthermore, nationwide environmental awareness programs can be launched to inform consumers about the sustainability and reduced carbon emissions of EVs, which can favorably affect attitudes and increase purchase intention.

Second, the study gives useful information to EV producers and automobile marketers. Understanding how price perception and perceived value influence purchase intention enables businesses to develop more competitive pricing strategies, explain future savings in cost, and highlight the environmental advantages of the EVs in their marketing campaigns. For example, value-based pricing strategies can be implemented by firms by considering the total cost of ownership (TCO), which includes savings over time from lower petroleum and service expenses. To reduce the financial burden on consumers, companies may implement more flexible financing strategies, including battery subscription models, installment plans, or leasing options. Eventually, firms can enhance the perceived value of EVs and strengthen consumer's purchase intention by effectively communicating both the economic and functional benefits.

Third, energy providers and infrastructure developers are vital for making people think that charging infrastructure is more valuable. Expanding charging infrastructure in critical locations like residential areas, workplace, shopping malls, and highways can further increase EV user's accessibility and convenience. Furthermore, the implementation of fast charging stations

and digital platforms such as mobile apps for discovering charging stations may reduce range anxiety and improve user experience. These enhancements improve the practical utility of EVs, increasing value of perception and encouraging intention to purchase.

Overall, the study's findings provide practical direction for different stakeholders seeking to establish strategies that boost EV purchase intention and speed Malaysia's transition to sustainable transportation.

5.4 Limitations of the Study

5.4.1 Limited Target Respondents

One of the main limitations of this study is the restriction of the target respondents. This research only focuses on Malaysian salaried workers who earn RM5,000 and above per month and who have never owned an electric vehicle. Although for now only this group have the financial capability to purchase electric vehicles, limiting the sample to a specific income group reduces the generalizability of the results. Sampling bias may occur when the selected respondents do not represent the whole population, which may lead to findings that cannot be applied to other demographic groups (Hassan, 2022).

In addition, the sampling locations were limited to urban and semi-urban areas such as Kuala Lumpur, Selangor, Penang, and Johor Bahru, where infrastructure development and purchasing power are relatively higher. Previous studies on electric vehicle purchase intention also reported that focusing on urban respondents may limit the applicability of the results because rural consumers may have different levels of awareness, accessibility, and acceptance toward electric vehicles (Bakar et al., 2025).

Therefore, the findings of this study may not fully represent the perception of the entire Malaysian population.

5.4.2 Study Design Limitation

This study adopts a quantitative cross-sectional survey design, where data were collected at a single point in time. Although cross-sectional surveys are efficient for examining relationships between variables, they have several methodological limitations. One major limitation is that cross-sectional studies cannot establish causal relationships because the variables are measured simultaneously, making it difficult to determine the temporal order between cause and effect (Baumeister et al., 2026). In addition, cross-sectional research only provides a snapshot of respondents' perceptions at one specific time, and it cannot capture changes in behaviour over time.

Additionally, this study uses self-reported questionnaire may introduce data response bias. The accuracy of the data gathered may be impacted by respondents' socially acceptable responses or their incomplete comprehension of the questions (Research Methods SR, 2023). Because not every individual in the population has an equal chance of being chosen, purposive sampling also restricts representativeness and may lower external validity (Sedgwick, 2015). Therefore, when applied to different populations or future situations, the results should be interpreted with caution.

5.4.3 Data Collection Limitation

The data for this study were collected using an online questionnaire distributed through Google Forms. Although online surveys allow researchers to collect data quickly and efficiently, this method may exclude respondents who do not have internet access or who are not familiar with

digital platforms. This may lead to under-coverage bias, where certain groups of the population are not included in the sample (Policy Journal of Social Science Review, 2022).

In addition, online questionnaires do not allow the researcher to control how respondents answer the questions. Some respondents may complete the survey without carefully reading the statements, which may reduce the reliability of the data. Self-reported surveys are also subject to recall bias and social desirability bias, which may affect the validity of the responses (Research Methods SR, 2023). Therefore, the accuracy of the collected data depends largely on the honesty and understanding of the respondents.

5.5 Recommendations for Future Research

Considering the limitations outlined in this study, a few suggestions are made for future research to deepen the insights into consumers' intention to purchase electric vehicles in Malaysia. These suggestions concentrate on enhancing research methods as well as broadening the research focus to yield findings that are more thorough and applicable to a wider audience.

5.5.1 Recommendation on Target Population

Future research is recommended to expand the target population to include a wider range of respondents. This study only focused on Malaysian salaried workers with a monthly income of RM5,000 and above, which may not fully represent the perception of the general population. Furthermore, electric vehicle prices in Malaysia are expected to become more affordable in the future, as cheaper models could enter the market and increase purchase, thereby enabling greater access to financing for lower-income individuals (Rahman, 2026). Future studies may include respondents from different

income levels, employment status, age groups, and educational backgrounds to obtain a more comprehensive understanding of consumer behaviour. Previous studies have suggested that demographic diversity can significantly influence technology adoption and purchase intention, particularly for high-cost products such as electric vehicles (Rezvani et al., 2015). In addition, future research may also include current electric vehicle owners comparing actual purchase behaviour with the intention of potential buyers.

Future research should consider collecting data from a broader geographic area, including rural and less developed regions in Malaysia. The current study mainly focused on urban and semi-urban areas where charging infrastructure and awareness of electric vehicles are relatively higher. However, consumers in rural areas may face different challenges such as limited charging facilities, lower exposure to government incentives, and different environmental attitudes. Including respondents from different regions may improve the generalizability of the findings and provide a more accurate representation of the Malaysian market. Previous research has indicated that infrastructure availability across regions can significantly influence the purchase intention of electric vehicles (Sierzchula et al., 2014; Li et al., 2017).

5.5.2 Recommendation on Research Design

Future research may adopt different research designs to overcome the limitations of cross-sectional studies. A cross-sectional survey is implied in this study measures respondents' perceptions at one point in time and is unable to observe the changes in behaviour. Longitudinal research may be conducted by future studies to examine how purchase intention toward electric vehicles changes over time, especially when new government policies, incentives, or technological improvements are introduced. Longitudinal designs are recommended when researchers aim to understand

behavioural changes and causal relationships more accurately (Taris et al., 2021).

Future research is encouraged to include additional variables in the research model. Availability of charging infrastructure, government support, price perception, and environmental awareness as stimulus variables, with perceived value as a mediator and purchase intention as the outcome variable, are examined in this study. However, consumer decision-making toward electric vehicles is complex and may also be influenced by factors such as social influence, perceived risk, brand trust, technological knowledge, and personal lifestyle. According to the Technology Acceptance Model and consumer behaviour theory, psychological and social factors may significantly affect the intention to adopt new technology (Venkatesh et al., 2012). Therefore, future studies may extend the current framework by integrating other theories such as the Theory of Planned Behaviour (TPB) developed by Ajzen (1991) or Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by Viswanath Venkatesh and colleagues (2003) to improve the explanatory power of the model.

5.5.3 Recommendation on Research Methodology

Mixed-method approaches are encouraged to be used by future researchers by combining quantitative and qualitative methods. This study relied solely on questionnaire data, which may not fully capture the reasons behind respondents' opinions. Qualitative methods such as interviews or focus group discussions may provide deeper insights into consumer perceptions, motivations, and concerns regarding electric vehicles. Previous research in consumer behaviour suggests that mixed-method research can improve the validity and richness of findings by integrating numerical data with detailed explanations (Creswell & Creswell, 2018).

5.6 Conclusion

In summary, the validity of all proposed hypotheses has been examined and the results provide empirical support for the relationships identified in the research framework. The findings contribute to a better understanding of the factors influencing purchase intention toward electric vehicles among Malaysian salaried workers, particularly in terms of charging infrastructure availability, government support, price perception, environmental awareness, and perceived value. A number of suggestions for further study are also made, along with a discussion of the constraints that were faced during the research process. Overall, this research provides valuable empirical evidence on the factors affecting electric vehicle purchase intention and serves as a useful reference for future scholarly studies.

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APPENDICES

Appendix 3.1 Research Instrument

Section A: Pre-Screening Questions

No.	Question	Options
1.	Are you between the ages of 18 and 60 and possess a valid driving license?	☐ Yes ☐ No
2.	Do you currently work in Kuala Lumpur, Selangor, Penang, or Johor Bahru?	☐ Yes ☐ No
3.	Are you currently earning a fixed monthly salary of RM5,000 or above from your employment?	☐ Yes ☐ No
4.	Are you new to electric vehicles (EVs), meaning you have never owned or purchased one before?	☐ Yes ☐ No
(Only respondents answering "Yes" will proceed to the next section)		

Section B: Demographic Profile Questions

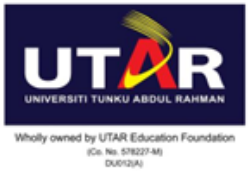
No.	Question	Options
1.	What is your gender?	☐ Male ☐ Female ☐ Prefer not to say
2.	What is your age group?	☐ 18 – 30 years ☐ 31 – 40 years ☐ 41 – 50 years ☐ 51 – 60 years
3.	What is your highest education level?	☐ Secondary School ☐ Diploma ☐ Bachelor's Degree ☐ Master's Degree ☐ Doctorate (PhD) ☐ Others
4.	What is your employment status?	☐ Full-time salaried worker ☐ Part-time salaried worker ☐ Self-employed (with salary/income)
5.	What is your monthly income range?	☐ RM5,000 – RM6,999 ☐ RM7,000 – RM8,999 ☐ RM9,000 – RM10,999 ☐ RM11,000 and above
6.	Where is your residential location?	☐ Kuala Lumpur ☐ Selangor ☐ Penang ☐ Johor

Section C: Independent and Dependent Variable Questions

Variables	No.	Item Statements	Source/ Citation
Availability of Charging Infrastructure (CI)	CI1	I am satisfied with the distance between charging stations for electric vehicles.	Carley et al. (2013), Junquera et al. (2016), Du et al. (2024), She et al. (2017)
	CI2	I am satisfied with the location of the charging infrastructure for electric vehicles.	
	CI3	I am satisfied with the availability of charging infrastructure for electric vehicles.	
	CI4	I am satisfied with the ease of finding charging stations for electric vehicles.	
Government Support (GS)	GS1	Financial incentives from the government encourage me to purchase electric vehicles.	Zhang et al. (2013), Bjerkan et al. (2016), Mersky et al. (2016)
	GS2	Government purchase subsidies make it easier for me to purchase electric vehicles.	
	GS3	Reducing purchase-related taxes increases my intention to purchase electric vehicles.	
	GS4	The government's charging infrastructure expansion policy supports my adoption of electric vehicles.	
Price Perception (PP)	PP1	I think the purchasing cost of EVs is higher than conventional vehicles.	Hu et al., (2023),Dutta & Hwang (2021)
	PP2	I believe that replacing a battery in an EV can be expensive.	
	PP3	Compared with conventional vehicles, high-initial acquisition cost and battery replacement cost make it less attractive to purchase.	
Environmental Awareness (EA)	EA1	I understand that combustion of fossil fuels (e.g. gas, oil), release carbon dioxide (C02) into the atmosphere.	Wang et al. (2022), He et al. (2018)
	EA2	I believe that driving a traditional fuel vehicle will have negative effects on the environment, such as greenhouse impact, bad air quality and etc.	
	EA3	I'm willing to change my driving mode if it pollutes the environment.	
	EA4	I feel that it is my responsibility to protect the environment.	
Perceived Value (PV)	PV1	Electric vehicles provide better value for money compared to traditional vehicles.	Sweeney et al. (2001), Chu et al.

	PV2	I find the performance of the electric vehicle powertrain to be satisfying.	(2007), Kim et al. (2007), Chen et al. (2019)
	PV3	Electric vehicles offer more stable and reliable operating performance.	
	PV4	Driving an electric vehicle gives me a sense of pleasure and enjoyment.	
Purchase Intention (PI)	PI1	I hope to see more electric vehicle brands and models available in the market.	Yang (2018), Kim et al. (2018), Huang and Ge. (2019)
	PI2	I intend to purchase an electric vehicle in the future.	
	PI3	If the electric vehicle performs well, I would recommend it to my friends.	
	PI4	I am willing to consider an electric vehicle as my next vehicle purchase.	

Appendix 3.2 Questionnaire for Main Study



Greeting to all,

We are final year undergraduate students of Bachelor of Marketing (Hons), from Faculty of Business and Finance in University Tunku Abdul Rahman (UTAR) Kampar campus. As part of our research, we are conducting a research project on **"Exploring Purchase Intention of Electric Vehicles among Malaysian Salaried Workers** This research aims to **explore factors influencing salaried workers in Malaysia's purchase intention towards Electric Vehicle (EV) through the SOR model and Perceived Value Theory, considering the availability of charging infrastructure, government support, price perception, and environmental awareness.**

This survey will only take you approximately **5 minutes**, and all participation towards this survey are voluntary. Rest assured that all the responses collected will be used solely for academic purposes, and will be kept private and confidential. Thank you in advance for your time and cooperation in answering our questionnaire.

Your participation is highly appreciated.

For further inquiries, please contact us at **(ongwanwei@1utar.my or ericmeesoonli513@1utar.my).**

Yours sincerely,

Ong Wan Wei 2202497

Mee Soon Li 2105017

Prepared by:

ONG WAN WEI

Endorsed by:

DR. LOH XIU MING

PERSONAL DATA PROTECTION STATEMENT

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Notice:

1. The purposes for which your personal data may be used are inclusive but not limited to:-
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    - For processing any benefits and services
    - For communication purposes
    - For advertorial and news
    - For general administration and record purposes
    - For enhancing the value of education
    - For educational and related purposes consequential to UTAR
    - For the purpose of our corporate governance
    - For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan

2. Your personal data may be transferred and/or disclosed to third parties and/or UTAR collaborative partners, including but not limited to the respective and appointed outsourcing agents for the purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.

2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

3. You may access and update your personal data by writing to us at 019-410 8238 ongwanwei@1utar.my..

Acknowledgment of Notice

[ ] I have been notified by you and that I hereby understood, consented and agreed per UTAR above notice.

[ ] I disagree, my personal data will not be processed.

.....
Name:
Date:

Universiti Tunku Abdul Rahman

Exploring Purchase Intention of Electric Vehicles among Malaysian Salaried Workers

Instructions:

1. There are **three (3)** sections in this questionnaire. Please answer ALL questions in ALL sections.
2. Completion of this form will take you less than 5 minutes.
3. The contents of this questionnaire will be kept **strictly confidential**.

Voluntary Nature of the Study

Participation in this research is entirely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. There is no foreseeable risk of harm or discomfort in answering this questionnaire. This is an anonymous questionnaire; as such, it is not able to trace response back to any individual participant. All information collected is treated as strictly confidential and will be used for the purpose of this study only.

I have been informed about the purpose of the study and I give my consent to participate in this survey.
YES ( ) NO ( )

Note: *If yes, you may proceed to next page or if no, you may return the questionnaire to researchers and thanks for your time and cooperation.*

Screening Questions

Section A :Pre-Screening Question

1. Are you between the ages of 18 and 60 and possess a valid driving license? *

- ◯ Yes
- ◯ No

2. Do you currently work in Kuala Lumpur, Selangor, Penang, or Johor Bahru? *

- ◯ Yes
- ◯ No

3. Are you currently earning a fixed monthly salary of RM5,000 or above from your employment? *

- ◯ Yes
- ◯ No

4. Are you new to electric vehicles (EVs), meaning you have never owned or purchased one before? *

- ◯ Yes
- ◯ No

Section B : Demographic Profile Questions

Please fill in your personal details in this section and data will be kept strictly confidential. Thank you

1. What is your gender? *

- ◯ Male
- ◯ Female
- ◯ Prefer not to say

2. What is your age group? *

- ◯ 18 – 30 years
- ◯ 31 – 40 years
- ◯ 41 – 50 years
- ◯ 51 – 60 years

3. What is your highest education level? *

- ◯ Secondary School
- ◯ Diploma
- ◯ Bachelor's Degree
- ◯ Master's Degree
- ◯ Doctorate (PhD)
- ◯ Others

5. What is your monthly income range ? *

- ○ RM5,000 - RM6,999
- ○ RM7,000 - RM8,999
- ○ RM9,000 - RM10,999
- ○ RM11,000 and above

6. Where is your residential location ? *

- ○ Kuala Lumpur
- ○ Selangor
- ○ Penang
- ○ Johor

Section C : Questionnaire Items [1/6]

Kindly select the option that most accurately reflects your level of agreement on a scale from 1 to 5.
(1)=Strongly Disagree, (2)=Disagree, (3)=Neutral, (4)=Agree, (5)=Strongly Agree

CI : Availability of Charging Infrastructure

CI1: I am satisfied with the distance between charging stations for electric vehicles *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

CI2: I am satisfied with the location of the charging infrastructure for electric vehicles *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

CI3: I am satisfied with the availability of charging infrastructure for electric vehicles *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

CI4: I am satisfied with the ease of finding charging stations for electric vehicles *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Section C : Questionnaire Items [2/6]

Kindly select the option that most accurately reflects your level of agreement on a scale from 1 to 5.
(1)=Strongly Disagree, (2)=Disagree, (3)=Neutral, (4)=Agree, (5)=Strongly Agree

GS : Government Support

GS1: Financial incentives from the government encourage me to purchase electric vehicles. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

GS2: Government purchase subsidies make it easier for me to purchase electric vehicles. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

GS3: Reducing purchase-related taxes increases my intention to purchase electric vehicles. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

GS4: The government's charging infrastructure expansion policy supports my adoption of electric vehicles. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Section C : Questionnaire Items [3/6]

Kindly select the option that most accurately reflects your level of agreement on a scale from 1 to 5.
(1)=Strongly Disagree, (2)=Disagree, (3)=Neutral, (4)=Agree, (5)=Strongly Agree

PP : Price Perception

PP1: I think the purchasing cost of EVs is higher than conventional vehicles. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

PP2: I believe that replacing a battery in an EV can be expensive. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

PP3: Compared with conventional vehicles, high-initial acquisition cost and battery replacement cost make it less attractive to purchase. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Section C : Questionnaire Items [4/6]

Kindly select the option that most accurately reflects your level of agreement on a scale from 1 to 5.
(1)=Strongly Disagree, (2)=Disagree, (3)=Neutral, (4)=Agree, (5)=Strongly Agree

EA : Environmental Awareness

EA1: I understand that combustion of fossil fuels (e.g. gas, oil), release carbon dioxide (C02) into the atmosphere. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

EA2: I believe that driving a traditional fuel vehicle will have negative effects on the environment, such as greenhouse impact, bad air quality and etc. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

EA3: I'm willing to change my driving mode if it pollutes the environment. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

EA4: I feel that it is my responsibility to protect the environment. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Section C : Questionnaire Items [5/6]

Kindly select the option that most accurately reflects your level of agreement on a scale from 1 to 5.
(1)=Strongly Disagree, (2)=Disagree, (3)=Neutral, (4)=Agree, (5)=Strongly Agree

PV : Perceived Value

PV1: Electric vehicles provide better value for money compared to traditional vehicles. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

PV2: I find the performance of the electric vehicle powertrain to be satisfying. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

PV3: Electric vehicles offer more stable and reliable operating performance. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

PV4: Driving an electric vehicle gives me a sense of pleasure and enjoyment. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Section C : Questionnaire Items [6/6]

Kindly select the option that most accurately reflects your level of agreement on a scale from 1 to 5.
(1)=Strongly Disagree, (2)=Disagree, (3)=Neutral, (4)=Agree, (5)=Strongly Agree

PI : Purchase Intention

PI1: I hope to see more electric vehicle brands and models available in the market. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

PI2: I intend to purchase an electric vehicle in the future. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

PI3: If the electric vehicle performs well, I would recommend it to my friends. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

PI4: I am willing to consider an electric vehicle as my next vehicle purchase. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree